

CLAIMS

What is claimed is:

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1. A personal tracking system, comprising:
a wireless communication device;
a pedometer electrically coupled to the wireless communication
device; and
10 an electronic compass operably positioned with respect to the
pedometer, wherein readings from the pedometer and the electronic compass
are received by the wireless communication device to provide position
information.
 - 15 2. The system of claim 1 wherein the wireless communication device
comprises one of a cell phone or a mobile radio.
 3. The system of claim 1 wherein the pedometer is electrically coupled
to the wireless communication device via a wired or wireless link.
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 4. The system of claim 1 wherein the pedometer is electrically coupled
to the wireless communication device in accordance with a protocol selected
from the group consisting of: an IEEE 802.15.4 wireless protocol, and IEEE
802.11 wireless protocol, and a short-range wireless communication protocol.
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 5. The system of claim 1 wherein the pedometer comprises at least
one single-axis accelerometer.
 6. The system of claim 1 wherein the electronic compass is
30 mechanically coupled to one of the wireless communication device or the
pedometer.

7. The system of claim 1 further comprising:
a barometer electrically coupled to the wireless communication
device, wherein barometric signals are received by the wireless communication
5 device to provide altitude information.

8. The system of claim 1 further comprising:
a GPS unit electrically coupled to the wireless communication
device, wherein GPS signals from the GPS unit provide a longitudinal coordinate
10 and a latitudinal coordinate to the wireless communication device.

9. The system of claim 1 further comprising:
a server in communication with the wireless communication device,
wherein position information is sent from the wireless communication device to
15 the server in response to a position request.

10. A method of tracking a location of a person, comprising:
receiving pedometer data from a pedometer;
receiving heading information from an electronic compass;
20 determining the location of the person based on the pedometer
data and the heading information; and
sending a position information message block from a wireless
communication device, the position information message block comprising the
determined location.

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11. The method of claim 10 wherein the position information message
block is sent from one of a cell phone or a mobile radio.

12. The method of claim 10 further comprising:
receiving altitude information from a barometer; and
determining the location of the person based on the altitude
5 information.
13. The method of claim 10 further comprising:
receiving a personal reference location input; and
determining the location of the person based on the personal
10 reference location input.
14. The method of claim 10 further comprising:
receiving GPS coordinate information; and
determining the location of the person based on the GPS
15 coordinate information.
15. The method of claim 10 further comprising:
receiving the position information message block at a server; and
updating personal tracking information based on the received
20 position information message block.
16. A system for tracking a location of a person, comprising:
means for receiving pedometer data from a pedometer;
means for receiving heading information from an electronic
25 compass;
means for determining the location of the person based on the
pedometer data and the heading information; and
means for sending a position information message block from a
wireless communication device, the position information message block
30 comprising the determined location.

17. The system of claim 16 further comprising:
means for receiving altitude information from a barometer; and
means for determining the location of the person based on the
5 altitude information.

18. The system of claim 16 further comprising:
means for receiving a personal reference location input; and
means for determining the location of the person based on the
10 personal reference location input.

19. The system of claim 16 further comprising:
means for receiving GPS coordinate information; and
means for determining the location of the person based on the GPS
15 coordinate information.

20. The system of claim 16 further comprising:
means for receiving the position information message block at a
server; and
20 means for updating personal tracking information based on the
received position information message block.

21. An electronic module for a personal tracking system, comprising:
a controller;
a wireless transceiver operably connected between the controller
5 and a pedometer;
an electronic compass electrically coupled to the controller; and
a wired connection to allow interfacing with a wireless
communication device, wherein position information is determined based on
readings from the pedometer and the electronic compass, and wherein position
10 information is provided to the wireless communication device via the wired
connection.
22. The module of claim 21 wherein the electronic compass is
electrically coupled to the controller via one of a wired or a wireless link.
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23. The module of claim 21 wherein the wireless communication device
comprises one of a cell phone or a mobile radio.
24. The module of claim 21 wherein the wireless transceiver is
20 operably connected to the pedometer in accordance with an IEEE 802.15.4
wireless protocol.
25. The module of claim 21 further comprising:
a barometer electrically connected to the controller, wherein altitude
25 information is determined based on barometric signals from the barometer.
26. The module of claim 21 further comprising:
a GPS unit electrically coupled to the controller, wherein GPS
signals from the GPS unit provide a longitudinal coordinate and a latitudinal
30 coordinate to the controller.